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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,134	04/19/2000	Yuji Kojima	FUJZ 17.261	3495

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EXAMINER

HA, YVONNE QUY M

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/552,134

Applicant(s)

KOJIMA ET AL.

Examiner

Yvonne Q. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amended claim 1 has been entered. Claims 1-12 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioli et al (US Patent 6,510,151) in view of Gossett Dalton et al (US Patent 6,426,955).

Referring to claim 1, Cioli discloses a packet transferring apparatus (figure 1, references B1-B4) which communicates between terminals belonging to networks (figure 1, references ES 1-4) comprising; a main processor (i.e. CPU) for executing a routing process (figure 2, reference 23), a filtering process (figure 3, references 33, 34); a first portion, arranged a subsequent stage of the main processor (i.e. store, update, delete process) (col. 7, lines 55-67, receiving packet and start filtering process; col. 8, lines 1-13, checking if destination address is present in the BAF table before CPU resumed) for determining whether or not a packet outputted from the main processor is conformable with a session establishment condition (col. 7, lines 63-67; col. 8, lines 4-7, determining whether the applicable packet corresponds to a known or programmed connection); second portion, arranged at a preceding stage (i.e. entry table and time stamp) of the main processor (col. 8, lines 5-18, determining whether the connection is known for source/destination address pair, if not the destination address for that packet is forward to the

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BAF table, the source address is also added to the table, the packet is filtered, which means all future communications of these two end stations will be filtered without involving the CPU again; and time stamp of entries in the table), for receiving and holding packet information from the first portion when the first portion determines that the packet is conformed and for providing a bypass of the main processor with subsequent packets belonging to a same session (col. 7, lines 34-42, a known connection table is implement to maintain information concerning known connections where the table is associated with a host CPU). Cioli does not expressly disclose priority control. However, Gossett Dalton discloses a priority control process (figure 1, reference 110, col. 14, lines 21-25). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Cioli bridge network with filtering process and Gossett Dalton priority process due to the fact the centralized routing engine is to assist gateways/bridge in making routing decisions for my types of calls. With this flexibility would require preferences that define operation limits, which result in priority of a session or calls depending on preset criteria.

Referring to claim 2, Cioli discloses all aspects of the claimed invention and further teaches the first portion comprises a session establishment-managing table where the packet information and priority information are preset according to a network management policy, and a session establishment managing processor for retrieving the table to determine whether or not the packet is conformed to the session establishment condition (figure 6, reference 62 source table; figure 8, reference 84; col. 9 lines 29 filter connection table).

Referring to claim 3, Cioli discloses all aspects of the claimed invention and further teaches the second portion comprises a session management table for dynamically holding the

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packet information relating to the same session provided by the session establishment managing processor, and a session management processor for retrieving the session management table to provide the bypass with the subsequent packets of the same session (col. 7, lines 34-42, known connection table).

Referring to claim 4, Cioli discloses all aspects of the claimed invention and further teaches when retrieving the session management table finds no conformed entry, the second portion inverts constituent information of each entry to repeat the retrieval (col. 8, lines 1-14).

Referring to claim 12, Cioli discloses all aspects of the claimed invention and further teaches the session management table attaches to indexes of a number of kinds required for each field value (col. 3, lines 47-50).

4. Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioli et al (US Patent 6,510,151) in view of Gossett Dalton et al (US Patent 6,426,955) and in further view of Boucher et al (US Patent 6,247,060).

Referring to claims 5-11, Cioli and Gossett Dalton disclose all aspects of the claimed invention but does not expressly disclose when a communication form is the TCP and UDP communication, an establishment or closure of the session is performed with a code bit of a packet format; the second portion uses an FIN/RST of the code bit as a session closure flag, closes the session and deletes a conformed entry of the session management table. However, Boucher discloses the for other complexities of the TCP protocol, the host driver software handles connection setup and breakdown, out of order data and nonstandard flags; the FIN segment signals the close of the connection (column 23, lines 34). The retransmission timeout occurs when there is no ACK for previously sent data within the expected time period (col. 23,

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lines 28-29). Boucher further teaches that no FIN/SYN/URG/PSH/RST bits set is an ACK or a pure receive segment (col. 58, lines 52-57). The interrupt mask is represented as IMR flag (figure 20) and slow/fast paths are set with different flags (figure 16). Out of order segments occurs when we receive a segment with a sequence number other than the next expected sequence number (col. 23, lines 31-33). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Cioli bridge network with filtering process, Gossett Dalton priority process due to the fact the centralized routing engine is to assist gateways/bridge in making routing decisions for my types of calls, and Boucher TCP/UDP connection and breakdown. Session establishments and breakdown are the same process as initiating and disconnect a call. TCP/UDP session connection and breakdown are considered as complex operations of the protocol. These are TCP exceptions where an advanced software module is handled separately during TCP connection setup where fast path or slow path will be selected during the "steady state" operation.

Response to Arguments

5. Applicant's arguments filed on 11-17-03 have been fully considered but they are not persuasive. Responding to the first argument on page 5, line 12, the applicant argued that Cioli is not arranged at a subsequent stage of the main processor and does not determine the output packet conformance with session establishment condition. The examiner disagrees because the interpretation of a subsequent stage of the main processor (i.e. store, update, delete process) where Cioli discloses receiving packet and start filtering process (col. 7, lines 55-67); checking if destination address is present in the BAF table before CPU resumed (col. 8, lines 1-13); Cioli further discloses determining whether the applicable packet corresponds to a known or

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programmed connection (col. 7, lines 63-67; col. 8, lines 4-7). The second argument on page 5, line 5, and applicant argued that Cioli does not disclose the second portion arranged at a preceding stage of the main processor and receive/hold packet information from the first portion. The examiner disagrees because the interpretation of the second portion at a preceding stage of the main processor (i.e. entry table and time stamp); Cioli discloses determining whether the connection is known for source/destination address pair, if not the destination address for that packet is forward to the BAF table, the source address is also added to the table, the packet is filtered, which means all future communications of these two end stations will be filtered without involving the CPU again; and time stamp of entries in the table (col. 8, lines 5-18); a known connection table is implement to maintain information concerning known connections where the table is associated with a host CPU (col. 7, lines 34-42).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Berl et al (US Patent 5,940,390) discloses mechanism for conveying data prioritization information among heterogeneous nodes of a computer network
- Golden et al. (US Patent 6,563,793) discloses guaranteed quality/class of service within and across networks using existing reservation protocols and frame formats
- Chuah et al (US Patent 6,400,722) discloses optimum routing system

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- Borella et al (US Patent 6,587,433) discloses remote access server for multiple service classes in IP networks
- Picaso et al. (US Patent 5,841,990) discloses network connector operable in bridge node and bypass node
- Civanlar et al. (US PUB 2002/0024945) discloses WAN based gateway

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH

February 8, 2004


Ajit Patel
Primary Examiner